



PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Hideo MIYAZAKI, et al.

Appln. No.: 10/644,044

Filed: August 20, 2003

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Group Art Unit: 1753

Examiner: PHASGE, ARUN S

For: METHOD FOR TREATING ORGANIC WASTEWATER CONTAINING
AMINOPOLYCARBOXYLIC ACID

DECLARATION UNDER 37 C.F.R. §1.132

Assistant Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

I, Hideo MIYAZAKI, do declare and state as follows:

I graduated from Tohoku University, Faculty of Science, Chemistry, with a Master of Science in March of 1976, and obtained a Doctor of Philosophy in the field of chemistry from Chiba University, graduate school of science and technology in March of 1999.

I have been employed by Fuji Photo Film Co., Ltd., since April 1 of 1976. From 1976, I have been engaged in research and developing center of the said Company and at first was involved in analytical work on photographic materials, and from 1985 to now, I have been involved in the research and developing of processing agents for photographic materials.

I am a co-inventor of the invention described and claimed in the above-named application. In order to demonstrate the unexpected superiority of the present invention, the following comparative experimentation was conducted by me or under my supervision.

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EXPERIMENTATION**1. Example**

An electrolytic oxidation treatment was conducted in the same manner as in Example 1 of the present specification, except for adjusting pH of waste liquor to 7.0 by sodium hydroxide and sulfuric acid and fluctuating a vibration frequency as set forth in the following Table.

2. Comparative Example

An electrolytic oxidation treatment was conducted in the same manner as in the above-mentioned Example, except for using a stirring apparatus corresponding to the stirring apparatus used in the cited reference Suzuki (U.S.P. 5,296,111), in place of a vibrating plate in the apparatus used in Example 1 of the present specification. Since there is only a disclosure: "vigorous stirring" in Example 5 of the cited reference Suzuki, Comparative Example used a general-purpose 70W high-power stirring apparatus BL1200 (Heidon-Three-One Motor), manufactured by SHINTO SCIENTIFIC CO., LTD., as a stirring apparatus capable of achieving the "vigorous stirring". The stirring was performed with 300 rpm as a speed of revolution to the extent that an electrolyte does not overflow from an electrolytic tank.

These results obtained are set forth in the following Table.



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Table

Electrolysis Time (hr)	Example: Vibration frequency (cycle/second)										Comparative Example	
	5 (cycles/second)		10 (cycles/second)		100 (cycles/second)		120 (cycles/second)				COD	EDTA
	COD	EDTA	COD	EDTA	COD	EDTA	COD	EDTA	COD	EDTA		
0	20000	620	20000	620	20000	620	20000	620	20000	620	20000	620
1	19300	600	18000	550	17900	530	19000	590	19500	600	19500	600
2	18400	580	17700	390	17100	350	18100	540	18800	580	18800	580
4	12100	530	11500	15	10900	10	13000	450	14500	540	14500	540
6	9100	440	5800	0	5700	0	9000	390	11800	500	11800	500
8	7800	360	4800	0	4100	0	7100	280	9800	420	9800	420
10	6100	280	2900	0	2800	0	5900	220	7200	370	7200	370

Unit: COD (ppm), EDTA (mg/L)

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As seen from the above results, it was found that even if a stirring plate is used, in case that an electrolytic oxidation treatment is performed by vibrating at a frequency of 10 cycles/sec to 100 cycles/sec, COD and EDTA can be unexpectedly and remarkably reduced, compared to the case that an electrolytic oxidation treatment is performed by vibrating at a frequency outside the scope of the invention. Further, in the invention, COD and EDTA can be unexpectedly and remarkably reduced, compared to the Comparative Example that an electrolytic oxidation treatment is performed by "vigorous stirring".

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectively submitted,

Date: August 31, 2006

Hideo Miyazaki
Hideo Miyazaki